

**REMARKS**

Claims 1-10 are all the claims pending in the application.

Claim 1 is hereby amended to incorporate the features of dependent claims 2 and 3.

Claims 2 and 3 are hereby canceled without prejudice or disclaimer.

Applicants thank the Examiner for accepting the formal drawings, acknowledging the claim for foreign priority and considering the references cited with the Information Disclosure Statements filed September 27, 2006 and May 31, 2006.

**Claim Rejections - 35 U.S.C. § 112, Second Paragraph**

The Examiner rejected claims 8 and 10 under 35 U.S.C. § 112, second paragraph, alleging that certain features in the claims lack proper antecedent basis.

The present amendments to claims 8 and 10 obviate this rejection. In particular, the antecedent basis issues have been addressed by adding an article (“a”) to the features lacking a proper antecedent basis.

**Claim Rejections - 35 U.S.C. § 102(b) - Isaki - JP 9-021774**

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Isaki (JP 9-021774)(machine English translation).

Claim 1 recites, *inter alia*, a gas detection element; wherein the gas detection element is mounted in a cavity of the ceramic wiring substrate; and wherein the gas detection element includes a diaphragm structure section which is formed of a silicon substrate, and the diaphragm structure section includes a gas detection portion.

Isaki fails to disclose either: (1) a gas detection element having a diaphragm structure which is formed of a silicon substrate; or (2) a gas detection element mounted in a cavity of a ceramic wiring substrate.

Accordingly, claim 1 is patentably distinguishable over Isaki for at least this reason.

Further, claim 1 has been amended to incorporate the features of claims 2 and 3. Thus, assuming the Examiner would apply Isaki in view of Gehman et al. (US 2005/0081603) and Naito et al. (US 2003/0188968) as applied to claims 2 and 3 in the Office Action, amended claim 1 is also patentable over the subject combination for the following reasons.

As noted above, Isaki fails to disclose a gas detection element having a diaphragm structure which is formed of a silicon substrate and which is mounted in a cavity of a ceramic wiring substrate. On the other hand, neither Gehman nor Naito discloses any such feature.

In particular, Naito also fails to disclose these features of amended claim 1. Rather, Naito merely discloses a gas sensor element having a detection portion, in which a pair of electrodes are formed on a solid electrolyte layer 12 on a substrate on which dielectric layers 13, 19 are laminated. Naito does not disclose a gas element having a diaphragm structure and mounted in a cavity of a ceramic wiring substrate. Moreover, Naito has a completely different configuration than the gas sensor as defined in amended claim 1. As such, there is no motivation or rationale that would lead one of ordinary skill in the art to combine Naito and Isaki as suggested by the Examiner.

Gehman also fails to disclose any such feature. Rather, Gehman is directed to fitting an attaching part in a suspended condition of a cap within a projection provided for a casing housing a circuit board. This disclosure is quite different from the gas sensor of claim 1 (configured such that a recess is formed on a ceramic wiring substrate per se on which a gas detection element is mounted, and than an attaching part in a suspended condition of a cap is fitted into the recess). In this way, Gehman fails to remedy the above noted deficiencies of Isaki and Naito as applied to claim 1.

Thus, amended claim 1 is patentable over Isaki as applied in the Office action to claim 1, and additionally, claims 1 is patentable over Isaki, in further view of Gehman and Naito as applied to claims 2-5 and 8.

**Claim Rejections - 35 U.S.C. § 103(a)**

Claims 2-5 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Isaki as applied to claim 1, in further view of Gehman et al. (US 2005/0081603) and Naito et al. (US 2003/0188968).

This rejection is moot with regard to claims 2 and 3 which are hereby canceled by this Amendment.

Further, as set forth above, because Isaki, Gehman and Naito, either taken alone or in combination, fail to disclose all of the features recited in claim 1, claims 4, 5 and 8 are also allowable, at least by virtue of their dependencies.

**Claim Rejections - 35 U.S.C. § 103(a)**

Claims 6, 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Isaki.

Because the Examiner's suggested modifications of Isaki fail to remedy the deficiencies of Isaki as applied to claim 1 above, claims 6, 7 and 9 are also allowable, at least by virtue of their dependencies.

**Claim Rejections - 35 U.S.C. § 103(a)**

Claim 10 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Isaki in view of Gole (US 6,893,892).

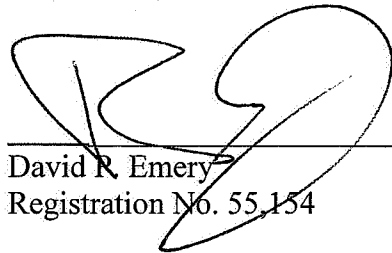
Because Gole, either taken alone or in combination with Isaki, fails to remedy the above noted deficiencies of Isaki as applied to claim 1, it is submitted that claim 10 is allowable, at least by virtue of its dependency.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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